FCC No. 93-328

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of

Preparation for International Telecommunication Union World Radiocommunication Conferences	))))	ET Docket No. 93-198

NOTICE OF INQUIRY

Adopted: June 24, 1993; Released: June 28, 1993

Comment Date: July 19, 1993
Reply Comment Date: July 29, 1993

By the Commission:

INTRODUCTION

1. By this Notice of Inquiry (NOI) we initiate a proceeding to prepare for the 1993 International Telecommunication Union (ITU) World Radiocommunication Conference (WRC-93). WRC-93, the first conference under the new plan for scheduling WRCs biennially, will meet November 15-19, 1993 in Geneva, Switzerland. WRC-93 is expected to select substantive issues for the agendas for the 1995 and 1997 WRCs. In this NOI, we seek information to assist us in identifying issues for inclusion on the WRC-95 and WRC-97 agendas, and in developing U.S. positions on those issues

BACKGROUND

2. ITU Restructuring.[1] In December of 1992, the ITU Additional Plenipotentiary Conference (APP) adopted a major restructuring of the ITU. While retaining the role of the Plenipotentiary Conference as the supreme organ of the ITU, and the essential roles of the Council (formerly the Administrative Council) and the General Secretariat, significant changes were made in the organization of the technical bodies that formerly comprised the specialized secretariats. Three major topical sectors have been established: 1) the Radiocommunication Sector (RS) that deals with radiocommunication matters to ensure rational, equitable and efficient use of the radio-frequency spectrum;[2] 2) the Telecommunication Standardization Sector (TSS) that studies and adopts recommendations relative to technical, operational and tariff questions with a goal of standardizing telecommunications worldwide; and 3) the Telecommunication Development Sector that promotes the development, expansion and operation of telecommunication networks and services, particularly in developing countries. Each sector works through a Bureau and conducts studies and develops decisions through conferences and study groups.

3. 1993 World Radiocommunication Conference. The APP recommended that WRCs convene every two years, beginning in November 1993.[3] The ITU Council (Council) proposes that WRC-93 recommend issues for the 1995 and 1997 WRCs. In addition, it directs that WRC-93 consider scheduling two specific topics for inclusion on the agenda for WRC-95: 1) a review of the Radio Regulations based upon a report of the Voluntary Group of Experts (VGE),[4] and 2) facilitating use of frequency bands allocated to

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[1] See Final Acts of the Additional Plenipotentiary Conference, Geneva, 1992. Specifically, for restructuring of the ITU, see Articles 7-14 of the Constitution (CS).

[2] The RS includes a nine-member part-time Radio Regulations Board (formerly members of the IFRB) which approve the Rules of Procedure for application of the Radio Regulations to the registration of frequency assignments. The Radio Regulations Board also carries out duties related to the task above.

[3] Some flexibility is permitted. Biennial conferences need not be convened, or additional conferences may be convened, as determined by the Council. See Final Acts of the Additional Plenipotentiary Conference, supra, Article 11B (CS).

[4] See Summary Report of the Fifth Meeting of the VGE, VGE Document 140-E (February 23, 1993).

the mobile-satellite service.[5] The Council recommendations for WRC-93 were subsequently adopted.[6]

DISCUSSION

4. We seek information and comment relating to telecommunications issues to be addressed at future World Radiocommunication Conference meetings.[7] The information we obtain will help us to determine United States' positions on issues at WRC-93, including whether the United States will seek to place specific issues on the WRC-95 and WRC-97 agendas, and, if so, its position on these issues. In addition to the two issues the Council recommends including on the WRC-95 agenda, we have identified several issues of importance to this country for possible inclusion on the agendas of WRC-95 or WRC-97: 1) broadcasting-satellite service (sound); 2) wind profiler radar systems; 3) space services; and 4) high frequency broadcasting. We discuss each of these issues below. Interested parties are asked to address whether and how the United States' interests will be served by placing each of these items on the agendas of WRC-95, WRC-97 or a later WRC (i.e., WRC-99, WRC-2001, etc.).[8] Parties are also invited to suggest new issues for inclusion on future WRC agendas in addition to those presented herein.

5. Consideration of the Report of the Voluntary Group of Experts (VGE). The Council formed the VGE in 1990 to develop recommendations for simplifying the international Radio Regulations.[9] The tasks of the VGE include: 1) simplifying the international Table of Frequency Allocations (international

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[5] See Resolution No. 1032, Document 7346-E, 47th ITU Administrative Council (Geneva, 1992); attached as Appendix I.

[6] See ITU Notification No. 1303 (Information received by 10 February 1993), Consultations.

[7] We note that although WRC-93 will recommend, and the Council will later adopt, the agendas for WRC-95 and WRC-97, an intervening Council may modify these agendas.

[8] The new biennial scheduling of WRCs should help reduce the pressure to include topics on the agenda of the earliest possible WRC. For example, with respect to WRC-95, we note that the two topics the Council directed that conference to consider, the report of the VGE and facilitating use of MSS bands, are likely to represent a substantial workload.

[9] See Resolution No. 8, ITU Plenipotentiary Conference (Nice, 1989).

Table) and international Radio Regulations related to it; 2) simplifying regulatory procedures contained in Articles 11-17 of the international Radio Regulations; and 3) simplifying the remainder of the international Radio Regulations not covered specifically under items 1 and 2. Although the work of the VGE is not complete,[10] it will output a report that makes recommendations concerning its task in the first half of 1994. The VGE will present its report to the Council and distribute it to administrations for consideration at WRC-95. Interested parties are alerted here that VGE matters will be considered at WRC-95 and that they may comment on specific VGE proposals later. At this time, we are interested in any matters related to the VGE tasks generally that may require attention at WRC-95 or WRC-97.

6. Mobile-Satellite Service. The bands 1492-1525, 1525-1559, 1610-1660.5, 1675-1710, 1930-2010, 2120-2200, 2483.5-2520 and 2670-2690 MHz are allocated for mobile-satellite services. Mobile-satellite services include aeronautical, maritime, land mobile and radiodetermination satellite services.[11] However, the mix of satellite services, and their status relative to other services in the bands referenced, are not consistent throughout the three regions of the international Table.

7. U.S. entities have shown significant interest in providing mobile satellite services (MSS) from both geostationary (GSO) and low earth orbit (LEO) satellite platforms.[12] These entities envision competing in a global market for MSS.[13] At world conferences, the United States has strived consistently for flexible, worldwide, generic MSS allocations[14] to meet future demand.

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[10] The Summary Report of the Fifth Meeting of the VGE is attached as Appendix III.

[11] These services are usually abbreviated as AMSS, MMSS, LMSS and RDSS respectively.

[12] For example, See Report and Order, ET Docket No. 91-280, 8 FCC Rcd 1812 (1993); Notice of Proposed Rule Making, ET Docket No. 92-28, 7 FCC Rcd 6414 (1992); Notice of Proposed Rule Making, ET Docket No. 92-191, 7 FCC Rcd 5626 (1992); and, Notice of Proposed Rule Making, GEN Docket No. 90-56, 5 FCC Rcd 1255 (1990).

[13] Specifically, entities that intend to provide services from low earth orbit satellite platforms.

[14] A generic MSS allocation would permit subcategories of MSS, including aeronautical, maritime and land mobile MSS to operate within a MSS spectrum allocation as demand and international coordination dictate.

8. We continue to believe that spectrum allocations to generic MSS operations yield the greatest spectrum efficiencies and economies of operation.[15] The Council recommended that WRC-93 include on its agenda for WRC-95 guidance on facilitating use of frequency bands allocated to the mobile-satellite service worldwide. WRC-93 therefore presents an opportunity for the United States to advocate resolution of issues affecting use of these bands and satellite feeder links at WRC-95. In certain regions, the 1992 World Administrative Radio Conference (WARC-92) placed restrictions on the type of transmissions MSS operators can engage in, and on the date that MSS operations can commence.[16] Because U.S. industry wants to engage in global MSS operations, parties should address preferred U.S. positions concerning MSS issues at WRC-95. Particular attention should be addressed to the attendant footnotes and resolutions adopted or modified at WARC-92 that would affect use of the MSS frequency bands.[17] Commenters should note that little time has passed since the conclusion of WARC-92, and therefore should provide rationale for including selected items in, or conversely, for limiting the scope of,[18] U.S. positions on MSS issues at WRC-95.

9. Broadcasting-Satellite Service (Sound).[19] WARC-92 adopted Broadcasting-Satellite Service (sound) (BSS (sound))

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[15] To facilitate a generic approach it may be necessary to adopt special provisions that delineate priority of communications within a given MSS frequency band (e.g. Article 61 of the RR as it concerns Maritime Mobile and Maritime Mobile-Satellite Services) and/or other provisions dealing with safety communications. These types of provisions may be considered in association with MSS issues at WRC-95.

[16] See generally, Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Final Acts), Malaga-Torremolinos, 1992.

[17] In this regard, parties are referred to the following footnotes adopted or modified at WARC-92: 726A, 726B, 726C, 726D, 739B, 730C, 731E, 731F, 733A, 733E, 734, 735A, 740A, 746A, 746B, 746C, 753, 753C, 753F, 754, 754B, 755A, 760A, 764A and 766; and the following resolutions: No. 46, No. 70 and No. 213.

[18] For example, one approach might be to limit the treatment of MSS matters solely to advancing the implementation date in 746B (WARC-92) to establish a common date for global implementation of MSS in the relevant bands.

[19] BSS (sound) commonly is referred to as satellite DAB or satellite DARS in the United States.

allocations in three bands.[20] Resolution No. 528 (RES528) of WARC-92 notes that efficient use of the BSS (sound) spectrum would be enhanced by a worldwide allocation in the 1-3 GHz range. However, it also noted that a worldwide allocation might cause difficulties in some countries in relation to existing services and that future planning may limit the effect of BSS (sound) on other services.[21] Thus, by RES528, WARC-92 resolved that a competent conference should convene before 1998 to address planning of BSS (sound) in the bands allocated to it in the 1-3 GHz range, to develop procedures for coordination of complimentary terrestrial broadcasting and to review necessary criteria for sharing with other services. Until a planning conference convenes, RES528 directs that BSS (sound) systems may only be introduced in the upper 25 MHz of the appropriate frequency band in order to reserve future planning options.

10. In the United States, international planning for BSS (sound) does not appear to be necessary, since the U.S. allocation is common only to the United States and India. In GEN Docket No. 90-357,[22] the Commission proposed to adopt the international BSS (sound) allocation at 2310-2360 MHz for the United States. Four applicants already have applied for licenses to initiate BSS (sound)operations.[23] We request comment on any outstanding international issues that need to be addressed, such as RES528 restricting BSS (sound) systems to the upper 25 MHz of the BSS (sound) bands until a planning conference is completed, to help introduction of U.S. systems. We also request that parties address BSS (sound) coordination vis-a-vis existing terrestrial operations. It is likely that planning and coordination with some existing terrestrial operations will be necessary, such as Canadian and Mexican terrestrial operations along our borders.

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[20] The three bands allocated are 1452-1492 MHz, 2310-2360 MHz and 2535-2655 MHz. The United States and India are allocated the 2310-2360 MHz band. The majority of countries are allocated the 1452-1492 MHz band. Twelve countries are allocated the 2535-2655 MHz band. See Final Acts, supra.

[21] See Resolution No. 528 (WARC-92), Final Acts, supra.

[22] See Notice of Proposed Rulemaking and Further Notice of Inquiry, GEN Docket No. 90-357, 7 FCC 7776 (1992).

[23] See applications of American Mobile Radio Corp., File Nos. 26/27-DSS-LA-93, 10/11-DSS-P-93; Digital Satellite Broadcasting Corp., File Nos. 28-DSS-LA-93, 12/13-DSS-P-93; Primosphere Limited Partnership, File Nos. 29/30-DSS-LA-93, 16/17-DSS-P-93; and Satellite CD Radio, Inc., File Nos. 49/50-DSS-P/LA-90, 58/59-DSS-AMEND-90, 8-DSS-MISC-91(2).

11. **Wind Profiler Radars.** WARC-92 invited the CCIR to make appropriate technical recommendations regarding operation of wind profiler radar systems (wind profiler)[24] at frequencies near 50, 400, and 1000 MHz.[25] In response, Radiocommunication (formerly CCIR) Task Group 8/2 is studying suitable frequency bands for wind profilers.[26] The United States[27] is participating in the work of this group and has addressed the suitability of frequency bands, site selection criteria, technical characteristics and spectrum requirements. The work of Task Group 8/2 is planned to be complete by the close of 1993. WARC-92 also recommends that the COSPAS-SARSAT system be protected by not locating wind profilers in the 402-406 MHz band, and invited the Council to include consideration of appropriate frequency assignments for wind profilers at the next competent WRC.

12. On March 10, 1993, the Commission proposed to allocate the 448-450 MHz band for wind profilers.[28] This band was selected based on a study by the National Telecommunications and Information Administration (NTIA). The NTIA study concluded that the 440-450 MHz band offers the best potential location for wind profiler operations.[29] In the Notice in that proceeding, the Commission tentatively concluded that the 448-450 MHz band poses

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[24] Wind profiler radar systems use radar signals to measure wind speed and direction, vertical wind velocity, intensity of turbulence and precipitation parameters. These systems are also used to track movement of particulate masses in the air. They have vertical resolution of 100 to 1000 meters from heights of 200 meters to over 18 kilometers. Data from wind profilers can be used to provide timely and accurate measurements of wind conditions (such as wind shear) for aviation; to improve weather forecasting and advance storm warning for meteorology; and to analyze air mass movement for environmental studies.

[25] Recommendation No. 621 (REC621), Implementation of Wind Profiler Radars at Frequencies near 50 MHz, 400 MHz and 1000 MHz, Final Acts WARC-92, supra.

[26] See CCIR Administrative Circular/375 (1992).

[27] U.S. participants include representatives from the FCC, NTIA, and other interested government agencies, and private industry.

[28] Notice of Proposed Rule Making and Notice of Inquiry (Notice/NOI), ET Docket No. 93-59, 58 FR 19644 (1993).

[29] See Assessment of Bands for Wind Profiler Accommodation, NTIA Report 91-290 (1991).

the least threat of interference to the primary Government users[30] and the secondary amateur licensees operating in the 420-450 MHz band. The Commission also requested comment on the need for additional spectrum for wind profiler applications on other frequencies,[31] including use of the 914-916 MHz band.[32]

13. Considering the work of Task Group 8/2, the Commission's proposal to allocate spectrum for wind profilers and REC621 that invites the Council to consider including on the next competent WRC (in our view 1995, or more likely later) appropriate frequency allocations for operational use of wind profilers, we invite parties to comment on whether to address international wind profiler allocation issues at WRC-95 or WRC-97.

14. Space Services. WARC-92 adopted RES712 that resolved that the next competent WRC considers certain matters concerning the space services. These matters are: 1) worldwide primary allocations for the earth-exploration and space research services in the appropriate bands within the 8-20 GHz range; 2) inter-satellite service requirements near 23 GHz; 3) providing spectrum for space-based active earth sensors around the 35 GHz band; and 4) including certain CCIR-developed space science service coordination parameters in Appendix 28 of the Radio Regulations. Considering RES712, we request comment on these matters.

15. High Frequency Broadcasting Planning. Worldwide high frequency (HF) broadcasting both domestic and international is conducted in bands allocated to the broadcast service between 5950 kHz and 26.1 MHz. HF broadcasters share and use these frequencies on an extensive, continuous basis. Consequently, frequency coordination among administrations is necessary to avoid harmful interference.

16. The current procedure for coordinating international HF broadcast frequency use is specified in Article 17 of the

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[30] The primary Government uses in this spectrum are radiolocation and space telecommand.

[31] Wind profilers operating higher in frequency provide finer resolution at lower altitudes than those operating at lower frequencies.

[32] The 914-916 MHz band for wind profilers was proposed in a petition filed by Radian Corporation, RM-8092 (1992). See Notice/NOI, supra.

international Radio Regulations [33] Article 17 provides for voluntary consultations among administrations regarding HF broadcasting use. A World Administrative Radio Conference for the Planning of HF Bands Allocated to the Broadcasting Service (HFBC-87) convened in 1987 to develop a computer-based planning system that would replace the Article 17 coordination procedures for selected bands. However, HFBC-87 deferred a planning decision for at least five years due to difficulties encountered in developing a computer-based system.[34] Subsequently, the Nice Plenipotentiary Conference scheduled a WARC for 1993 to address HF broadcasting planning issues. However, due to an IFRB report that emphasizes difficulties in implementing a computer-based planning system, the Council, at its 46th Session (1991), decided not to convene a 1993 WARC for HF broadcasting planning.

17. WARC-92 allocated additional spectrum to the HF broadcast service.[35] However, use of the additional spectrum is subject to planning procedures to be developed by a future conference.[36] Additionally, the APP and the Council have requested that the Radiocommunication Assembly (RA)(formerly the CCIR Plenary Assembly) associated with the 1993 WRC establish a work program regarding future work on HF broadcasting taking account of any IFRB report on the application of RES523 (WARC-92).[37]

18. Interested parties should comment on how the RA should address HF broadcasting planning issues within current allocations and the expected relationship of RA recommendations to the development of agendas for future WRCs. Parties should note that historically the needs of U.S. HF broadcasters have been met satisfactorily through the existing Article 17

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[33] Article 17, International Telecommunication Union Radio Regulations (1990). Article 17 provides coordination procedures relative to bands allocated exclusively to broadcasting. However, it is noted that much use of other HF bands is conducted on a non-interference basis pursuant to RR 342.

[34] HFBC-87 did instruct the International Frequency Registration Board (IFRB) to continue revising the proposed computer planning system.

[35] The additional bands allocated to HF broadcasting at WARC-92 are: 5900-5950, 7300-7350, 9400-9500, 11600-11650, 12050-12100, 13570-13600, 13800-13870, 15600-15800, 17480-17550 and 18900-19020 kHz.

[36] See RR Footnote 521B (WARC-92) and Resolution No. 523B (WARC-92).

[37] See Resolution No. 523 (WARC-92).

coordination procedures, and therefore, should comment on the urgency of addressing the HF issues described at a forthcoming WRC.

19. Other Matters. There are many Resolutions and Recommendations (RES/RECS) from past conferences (beginning approximately with WARC-79) that remain unresolved. Appendix II of this document provides a list and brief description of those RES/RECS. Since WRCs will be held biennially, we can begin planning for the placement and disposal of these RES/RECs by future conferences.[38] We invite comment from knowledgeable parties on the appropriate timeframe for considering these items at upcoming WRCs.[39]

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[38] For example, consideration of REC318 may lead to rechannelling of the VHF maritime band to 12.5 kHz and revision of Appendix 18 of the Radio Regulations. The Commission has this matter under consideration as part of our review of future trends concerning maritime communications. See Notice of Proposed Rulemaking, PR Docket No. 92-257, 7 FCC Rcd 7863 (1992).

[39] Unresolved resolutions and recommendations from past conferences are listed, with a brief description in Appendix II.

PROCEDURAL MATTERS

20. Authority for this Notice of Inquiry is contained in Sections 4(i), 303(r), and 403 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154(i), 303(r), and 403. Pursuant to Section 1.1204(a)(4) of the Commission's Rules, 47 CFR Section 1.1204(a)(4), no ex parte restrictions apply to this proceeding.

21. U.S. government conference preparations have begun and are being conducted by the Interdepartment Radio Advisory Committee (IRAC) and its Ad Hoc 208 interagency group. Ad Hoc 208 will be responsible for coordinating the preparatory activities of affected government agencies that use frequencies allocated for the government's telecommunications needs. The IRAC will make its conference recommendations to NTIA, which is responsible for developing Executive Branch telecommunications policies. NTIA's recommendations for U.S. policy and proposals will then be forwarded to the Department of State for coordination with the Commission's recommendations. Because the Commission participates in IRAC through a liason representative, we expect the Commission's and NTIA's recommendations for U.S. proposals to be generally consistent.

22. The Commission's recommendations will be forwarded to the Department of State for coordination with NTIA's recommendations as discussed above. WRC-93 is scheduled for November 11-15, 1993. Therefore, the Department of State would normally submit U.S. proposals by September 10, 1993. In view of the short period available for preparation and submission of U.S. proposals, the Commission is requesting comments within 21 days of the release of this Notice of Inquiry at the Commission's headquarters, and reply comments within 10 days thereafter. The dates are given below.

23. Pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, 47 CFR Section 1.415 and 1.419, interested parties may file comments on or before **July 19, 1993**, and reply comments on or before **July 29, 1993**, All relevant and timely comments will be considered by the Commission before taking further action in this proceeding. To file formally in this proceeding, participants must file an original and four copies of all comments, reply comments, and supporting comments. If participants want each Commissioner to receive a personal copy of their comments, an original and nine copies must be filed. Comments and reply comments should be sent to Office of the Secretary, Federal Communications Commission, Washington, DC 20554. Comments and reply comments will be available for public inspection during regular business hours in the FCC Public Reference Center (Room 239) of the Federal Communications Commission, 1919 M Street NW, Washington, DC 20554.

24. For further information concerning this Notice of Inquiry, contact Damon C. Ladson, Office of Engineering and Technology, or Thomas M. Walsh, Office of International Communications, Federal Communications Commission, Washington, DC 20554.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
Acting Secretary

APPENDIX I

INTERNATIONAL TELECOMMUNICATION UNION

ADMINISTRATIVE COUNCIL

47th SESSION - GENEVA - DECEMBER 1992

Document 7346-E
(CA47-130)
20 December 1992
Original: English

RESOLUTION

(approved at the final meeting (20.12.92))

R.No. 1032 World Radiocommunication Conference, 1993

The Administrative Council,

having considered

1. APP Recommendation No. PLEN/4,

2. APP Recommendation No. PLEN/1,

resolves

to convene a World Radiocommunication Conference in Geneva, for a period of five days starting on 15 November 1993, with the following agenda:

1. to make recommendations to the Council concerning the agenda for the 1995 World Radiocommunication Conference, including the review of the international Radio Regulations based on the report of the Voluntary Group of Experts and any guidance on facilitating the use of frequency bands allocated to the mobile-satellite service, by recommending the inclusion of these matters in the agenda of the 1995 World Radiocommunication Conference; and

2. to make recommendations for the preliminary agenda for the 1997 World Radiocommunication Conference.

APPENDIX II

Resolutions and Recommendations Related to Future ITU World Radiocommunication Conferences

Resolutions

Res. 4 (ORB-88) Period of Validity of Frequency Assignments to Space Stations Using the Geostationary-Satellite Orbit

Res. 8 (HFBC-87) Implementation of the Changes in Allocations in the Bands Between 4000 and 27500 kHz

Res. 16 (WARC-79) Relating to the Role of Telecommunications in Integrated Rural Development

Res. 19 (MOB-87) The Need to Study the Question of Including Decisions of Regional Administrative Radio Conferences in the international Radio Regulations

Res. 35 (WARC-79) Relating to a Procedure for Resolving a Disagreement over the Technical Standards or Rules of Procedure of the International Frequency Registration Board

Res. 39 (MOB-83) Relating to the Improved Use of the International Monitoring System In Applying Decisions of Administrative Radio Conferences

Res. 42 (ORB-88) Use of Interim Systems in the Broadcasting-Satellite and Fixed-Satellite (Feeder Link) Services in Region 2 for the Bands Covered by Appendix 30 (ORB-85) and Appendix 30A (ORB-88)

Res. 46 (ALOC-92) Interim Procedures for the Coordination and Notification of Frequency Assignments of Non-Geostationary-Satellite Networks in Certain Space Services and the other services to which the bands are allocated: resolves that a future WARC address the need for permanent procedures

Res. 60 (WARC-79) Information on the Propagation of Radio Waves in the Determination of the Coordination Area

Res. 63 (WARC-79) Protection of Radiocommunication Services Against Interference Caused by Radiation from Industrial, Scientific and Medical (ISM) Equipment

Res. 70 (ALOC-92) Establishment of standards for the operation of low-orbit satellite systems

Res. 94 (ALOC-92) Review of Resolutions and Recommendations of the World Administrative Radio Conferences

Res. 110 (ORB-88) Improved Procedures for Certain Bands of the Fixed-Satellite Service

Res. 111 (ORB-88) Planning of the Fixed-Satellite Service in the Bands 18.1-18.3 GHz, 18.3-20.2 GHz and 27-30 GHz

Res. 112 (ALOC-92) Allocation of Frequencies to the Fixed-Satellite Service in the Band 13.75-14 GHz: resolves that the next WARC review the coordination and technical sharing parameters for the Fixed-Satellite and Space Research Services at 13.75-14 GHz

Res. 113 (ALOC-92) Adjustments to the fixed service as a consequence of changes in the frequency allocations within the range 1-3 GHz

Res. 200 (MOB-87) Class of Emission to be Used for Distress and Safety Purposes on the Carrier Frequency 2182 kHz: complete transfer to new emission on 2182 KHz be decided by WRC

Res. 208 (MOB-87) Extension of the Frequency Bands Allocated to the Mobile-Satellite and Mobile Services and Their Conditions of Use

Res. 209 (MOB-87) Study and Implementation of a Global Land and Maritime Distress and Safety System

Res. 210 (MOB-87) Date of Entry into Force of the 10 kHz Guard-band for the Frequency 500 kHz in the Mobile Service (Distress and Calling)

Res. 211 (ALOC-92) Use by the Mobile Service of the Frequency Bands 2025-2110 and 2200-2290 MHz: resolves that the next competent WARC examine the sharing of 2025-2110 MHz and 2200-2290 MHz by the Mobile and Space Services

Res. 212 (ALOC-92) Implementation of Future Public Land Mobile Telecommunication Systems: invites CCIR/CCITT to develop technical characteristics and numbering plan to facilitate worldwide roaming for PLMTS

Res. 213 (ALOC-92) Sharing Studies Concerning the Use of the Bands 1492- 1525 MHz And 1675-1710 MHz in Region 2 by the Mobile-Satellite Service: invites CCIR to study sharing at 1.5 and 1.7 GHz in Region 2 of allocated services and mobile satellite service

Res. 300 (MOB-87) Use and Notification of the Paired Frequencies Reserved for Narrow-Band Direct-Printing Telegraph and Data Transmission Systems in the HF Bands Allocated on an Exclusive Basis to the Maritime Mobile Service

Res. 310 (MOB-87) Frequency Provisions for Development and Future Implementation of Ship Movement Telemetry, Telecommand and Data Exchange Systems

Res. 314 (MOB-87) Establishment of a Coordinated World-Wide System for the Collection of Data Relating to Oceanography

Res. 319 (MOB-87) General Review of the Bands 4000-4063 kHz and 8100-8195 kHz Allocated on a Shared Basis to the Maritime Mobile Service

Res. 330 (MOB-87) Frequencies for Routine (Non-Distress) Calling in the Bands Between 1605 kHz and 4000 kHz

Res. 331 (MOB-87) Introduction of Provisions for the Global Maritime Distress and Safety System (GMDSS) and Continuation of the Existing Distress and Safety Provisions

Res. 332 (MOB-87) Use of the Frequency 4209.5 kHz for NAVTEX type Transmissions in the Maritime Mobile Service

Res. 333 (MOB-87) Coordination of the Use of HF Maritime Mobile Frequencies for Transmission of High Seas Maritime Safety Information

Res. 334 (MOB-87) Inclusion in the Regulations to be Adopted by the World Administrative Telegraph and Telephone Conference (WATTC-88) of Provisions Concerning Charging and Accounting for Maritime Radiocommunications in the Maritime Mobile-Satellite Service except for Distress and Safety Communications, and Consequential Modifications to Article 66 of the international Radio Regulations

Res. 408 (MOB-87) Use of the Band 136-137 MHz by Services Other than the Aeronautical Mobile (R) Service

Res. 505 (WARC-79) Broadcasting-Satellite Service (Sound) in the Frequency Range 0.5 GHz to 2 GHz

Res. 507 (WARC-79) Relating to the Establishment of Agreements and Associated Plans for the Broadcasting- Satellite Service

Res. 508 (WARC-79) Relating to the Convening of a World Administrative Radio Conference for the Planning of the HF Bands Allocated to the Broadcasting Service

Res. 511 Programme of Action Relating to the Improvement, Testing, Adoption and Practical Implementation of the Planning System for the High Frequency Bands Allocated Exclusively to the Broadcasting Service, and Associated Provisions

Res. 512 (HFBC-87) Operation of HFBC Transmitters in the Extended Bands Above 10 MHz

Res. 513 (HFBC-87) Improvement in the Use of the HF Bands Allocated Exclusively to the Broadcasting Service by Avoiding Harmful Interference

Res. 515 (HFBC-87) Improvements to the HFBC Planning System and the Consultation Procedures

Res. 517 (HFBC-87) Transition from Double-Sideband (DSB) to Single-Sideband (SSB) Emissions in the HF Bands Allocated Exclusively to the Broadcasting Service

Res. 519 (ORB-88) Possible Extension to Regions 1 and 3 of Provisions for Interim Systems: resolves that a future WARC consider the possible application of regulatory provisions for BSS interim systems in Regions 1 & 3

Res. 522 (ALOC-92) Further Work By The CCIR Concerning the Broadcasting-Satellite Service (Sound): resolves that the CCIR study the broadcasting-satellite service (sound) with a view to developing provisions for sharing with other services in the same frequency band and that a competent WARC address this issue

Res. 523 (ALOC-92) Resolves that a WARC be convened to plan the bands allocated to HFBC at WARC '92; also WARC 1992 expanded bands not to be used until planning process has been completed.

Res. 524 (ALOC-92) Future Consideration of the Plans for the Broadcasting-Satellite Service in the Band 11.7-12.5 GHz (Region 1) and the Band 11.7-12.2 GHz (Region 3) in Appendix 30 and the Associated Feeder-Link Plans in Appendix 30A: resolves that a radio conference be convened to review and improve the Region 1 and 3 BSS plans at 11.7-12.5 GHz (Region 1) and 11.7-12.2 GHz (Region 3)

Res. 526 (ALOC-92) Future Adoption of Procedures to Ensure Flexibility in the Use of the Frequency Band Allocated to the Broadcasting-Satellite Service (BSS) for Wide RF-Band High-Definition Television (HDTV) and to Associated Feeder Links: resolves that a future WARC address the procedures for Broadcasting-Satellite for wide RF-band HDTV and associated feeder links

Res. 527 (ALOC-92) Terrestrial VHF Digital Sound Broadcasting: resolves that a competent administrative radio conference address

VHF terrestrial DAB for Region 1 and interested Region 3 countries

Res. 528 (ALOC-92) Introduction of the Broadcasting-Satellite Service (Sound) Systems and Complementary Terrestrial Broadcasting in the Bands Allocated to those services Within the Range 1-3 GHz: resolves that a competent WARC be convened not later than 1998 to plan BSS (sound)(S) in 1-3 GHz range, and to develop procedures for complementary terrestrial broadcasting

Res. 602 (MOB-87) Data Transmission for Maritime Radiobeacons for Differential Radionavigation Systems (Region 1)

Res. 641 (HFBC-87) Use of the Frequency Band 7000-7100 kHz

Res. 702 (WARC-79) Convening of a Regional Administrative Radio Conference to Establish Criteria for the Shared Use of the VHF and UHF Bands Allocated to Fixed, Broadcasting and Mobile Services in Region 3

Res. 704 (MOB-87) Holding of a Regional Administrative Radio Conference to Prepare Frequency Assignment Plans for the Maritime Mobile Service in the Bands Between 435 kHz and 526.5 kHz and in Parts of the Band Between 1606.5 kHz and 3400 kHz in Region 1 and to Plan for the Aeronautical Radionavigation service in the Band 415-435 kHz in Region 1

Res. 705 (MOB-87) Mutual Protection of Radio Services Operating in the Band 70-130 kHz

Res. 706 (MOB-87) Operation of the Fixed and Maritime Mobile Services in the Band 90-110 kHz

Res. 710 (ALOC-92) Primary Service Requirements for the Meteorological-Satellite and Earth Exploration-Satellite Services In the Band 401-403 MHz:resolves that the next competent WARC examine the meteorological-satellite and Earth exploration-satellite allocations in the bands 401-402 MHz and 402-403 MHz with the intent of raising the allocation status to primary

Res. 711 (ALOC-92) Possible Relocation of Frequency Assignments to Certain Space Missions from the 2 GHz Band to Bands above 20 GHz: resolves that the next competent WARC consider reallocation of frequencies supporting space missions in the 2 GHz band to bands above 20 GHz

Res. 712 (ALOC-92) Consideration by a Future competent WARC of issues dealing with Allocations to Space Services Which Were not Placed on the Agenda of WARC-92

RECOMMENDATIONS

Rec. 2 (WARC-79) Relating to the Examination by World Administrative Radio Conferences of the Situation with Regard to Occupation of the Frequency Spectrum in Space Radiocommunications

Rec. 13 (WARC-79) Relating to a World Administrative Radio Conference to Carry Out a General or Partial Revision of the international Radio Regulations

Rec. 14 (MOB-87) Identification and Location of Special Vessels, such as Medical Transports, by Means of Standard Maritime Radar Transponders

Rec. 15 (ORB-88) Review of Article 14 of the international Radio Regulations and Further Development of Technical Criteria for its Application

Rec. 66 (ALOC-92) Studies of the Maximum Permitted Levels of Spurious Emissions: recommends that CCIR submit a report to the next competent conference with a view to including spurious emission limits in the international Radio Regulations

Rec. 100 (WARC-79) Preferred Frequency Bands for Systems Using Tropospheric Scatter

Rec. 305 (WARC-79) Use of Channels 15 and 17 of Appendix 18 by On-Board Communication Stations

Rec. 310 (WARC-79) Automated UHF Maritime Mobile Radiocommunication System

Rec. 318 (MOB-87) Improved Efficiency in the Use of the Appendix 18 VHF Frequency Spectrum for Maritime Mobile Communications

Rec. 319 (MOB-87) The Need for Technical Improvements to Minimize the Risk of Adjacent Channel Harmful Interference Between Assignments Used for Narrow-Band Direct-Printing Telegraphy and Data Transmission Systems in Accordance with Appendix 31 and Resolution 300

Rec. 406 (WARC-79) Revision of the Frequency Allotment Plan for the Aeronautical Mobile (OR) Service

Rec. 509 (HFBC-87) Participation by Administrations in the Improvement of the Planning System for the HF Bands Allocated Exclusively to the Broadcasting Service

Rec. 510 (HFBC-87) Planning Parameters for the Double-Sideband (DSB) System in the HF Bands Allocated Exclusively to the

Broadcasting Service

Rec. 512 (HFBC-87) Propagation Prediction Method to be Used in the HF Bands Allocated Exclusively to the Broadcasting Service

Rec. 513 (HFBC-87) Broadcasting for National Coverage in the HF Bands

Rec. 514 (HFBC-87) Improvements to the Propagation Prediction Method to be Used for the HF Bands Allocated Exclusively to the Broadcasting Service

Rec. 515 (HFBC-87) Introduction of Transmitters and Receivers Capable of Both Double Sideband (DSB) and Single Sideband (SSB) Mode of Operation

Rec. 516 (HFBC-87) Use of Synchronized Transmitters in the HF Bands Allocated Exclusively to the Broadcasting Service

Rec. 517 (HFBC-87) Relative RF Protection Ratio Values for Single-Sideband (SSB) Emissions in the HF Bands Allocated Exclusively to the Broadcasting Service

Rec. 518 (HFBC-87) HF Broadcast Receivers

Rec. 519 (ALOC-92) Introduction of Single-Sideband (SSB) Emissions and Possible Advancement of the Date for Cessation of the Use of Double-Sideband (DSB) Emissions in the HF Bands Allocated to the Broadcasting Service: invites Administrative Council to include on the agenda of the next competent WARC the date for implementation of single-sideband emissions and cessation of double-sideband emissions in the HFBC bands

Rec. 605 (MOB-87) Relating to Technical Characteristics and Frequencies for Shipborne Transponders

Rec. 606 (MOB-87) The Possibility of Reducing the Band 4200-4400 MHz Used by Radio Altimeters in the Aeronautical Radionavigation Service

Rec. 607 (MOB-87) Future Requirements of the Band 5000-5250 MHz for the Aeronautical Radionavigation Service

Rec. 621 (ALOC-92) Implementation of Wind Profiler Radars at Frequencies near 50 MHz, 400 MHz, and 1000 MHz: invites Administrative Council to include on the agenda of the next competent WARC the question of appropriate frequency allocations for the operational use of wind profiler radars

Rec. 701 (WARC-79) Relating to the Use of the Frequency Band 1330-1400 MHz by the Radio Astronomy Service

Rec. 702 (WARC-79) Relating to the Use of the Frequency Band 1400-1727 MHz, 101-120 GHz and 197-220 GHz for Search For Intentional Emissions of Extraterrestrial Origin

Rec. 707 (WARC-79) Use of the Frequency Band 32-33 GHz Shared Between the Inter-Satellite Service and the Radionavigation Service

Rec. 709 (WARC-79) Sharing Frequency Bands Between the Aeronautical Mobile Service and the Inter-Satellite Service at bands above 50 GHz

Rec. 710 (WARC-79) Use of Airborne Radars in the Frequency Bands Shared Between the Inter-Satellite Service and the Radiolocation Service

Rec. 711 (WARC-79) Relating to the Coordination of Earth Stations

Rec. 714 (MOB-87) Compatibility Between the Aeronautical Mobile (R) Service in the Band 117.975-137 MHz and Sound Broad- casting Stations in the Band 87.5-108 MHz

Rec. 715 (ORB-88) Multi-Band and/or Multi-Service Satellite Networks Using the Geostationary-Satellite Orbit

Rec. 717 (ALOC-92) Sharing Criteria In Frequency Bands Shared By The Mobile-Satellite Service And The Fixed, Mobile And Other Radio Services

Rec. 718 (ALOC-92) Alignment of Allocations in the 7 MHz Band Allocated to the Amateur Service: recommends Administrative Council include on the agenda of the next competent WARC the possibility of aligning amateur allocations around 7 MHz

Rec. 719 (ALOC-92) Multiservice Satellite Networks Using the Geostationary Satellite Orbit: recommends Administrative Council include on the agenda of the next competent WRC the issue of multiservice satellite allocations and definitions

INTERNATIONAL TELECOMMUNICATION UNION

VOLUNTARY GROUP OF EXPERTS TO STUDY ALLOCATION AND IMPROVED USE OF THE RADIO-FREQUENCY SPECTRUM AND SIMPLIFICATION OF THE RADIO REGULATIONS

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SUMMARY REPORT OF THE FIFTH MEETING OF THE VGE

(Geneva, 15-24 February 1993)

1. Introduction

1.1 The Chairman of the VGE, Mr. K. Björnsjö, welcomed the participants from 25 administrations and the observers from five international organizations to the fifth meeting of the VGE. The list of documents to be considered by this meeting is at Annex A and the list of participants is at Annex B.

1.2 The Secretary-General addressed the meeting and again emphasized the need for positive results from the work of the VGE. Following the successful outcome of the recent Additional Plenipotentiary Conference of the Union, attention now focused on the VGE and there were high expectations that the final report of the VGE would provide a solid foundation for the World Radiocommunication Conference (WRC) foreseen for 1995 to make a substantial simplification of the complex body of the Radio Regulations.

1.3 The Chairman, in his opening remarks, stressed the need for the VGE to complete its work by March 1994. To do that, this fifth meeting would need to build upon the recommendations adopted at the last meeting and take further decisions so that the critical period of drafting texts during the next few months could be brought to a successful conclusion. In effect the VGE-6 must have available most of the text of a redraft of Volume I of the Radio Regulations. In Tasks 2 and 3 he foresaw a unique opportunity to effect major simplifications, in the first case, of the procedures in Chapter IV and in the second case, of the structure and contents of Chapters V-XII. In Task 1 he foresaw the VGE as initiating a longer-term process of simplification of Chapters I-III which the pattern of biennial WRCs could develop progressively, thereby providing opportunities for increasing flexibility in "the rational, equitable, efficient and economic use of the radio-frequency spectrum by all radiocommunication services, including those using the geostationary-satellite orbit" (see CS85A).

1.4 The agenda for the meeting as approved is at Annex C.

2. Reports on inter-sessional activities

2.1 The Chairman of the VGE reported that three meetings of the Steering Group had been held in Geneva, in November and December of 1992 and in January 1993. Two separate meetings had been held on Task 2 to consider drafts of the new "Basic Procedure", the contributions and outcome of which were in Documents 106, 107 and 108.

2.2 The Chairman referred to the APP-92 and the organizational changes now being implemented in the ITU. The VGE would need to take these into account, particularly the establishment of a Radiocommunication Sector with its own Bureau under an elected Director and the imminent conversion of the permanent Board of the IFRB into a part-time Radio Regulations Board. The Chairman also referred to the results of the WARC-92 which the VGE would need to take into account in all three tasks.

3. Presentation of Rapporteurs Reports

The VGE noted that the reports to be presented by the Rapporteurs would represent an intermediate stage of the work containing material to be studied in continued work of the Group.

3.1 Task 1

Mr. McGuire, in lieu of Mr. Hutchings who could not attend, presented the Rapporteur's Report following a meeting of a small ad hoc Group. That report, revised twice and re-issued as Document 130(Rev.2) during the meeting, contains in its Annex 1 illustrations of a possible regrouping of the radiocommunication services now defined in Article 1 into eight merged terrestrial services and ten merged space services. The report also contains in its Annex 2 examples of the simplifications that could be made in the Table of Article 8 covering bands in five ranges: 27.5 - 406.1 MHz, 406.1 - 1 700 MHz, 1 700 - 8 750 MHz, 8 750 MHz - 22.5 GHz and 22.5 - 54.4 GHz. In addition the report contains a set of four new recommendations to guide future work of the VGE, the whole report being offered for review and comments by VGE members by 15 August 1993. The report on Task 1 is at Annex D (Part 1).

3.2 Task 2

Mr. Davies reported that the VGE had before it two substantial drafts of the Basic Procedure, in Documents 106 and 107, both developed under the recommendations adopted at the last meeting. The two drafts differed substantially but both contained good points which, if they were combined in a single draft, as the VGE had requested (an example of which was given in Document 108) should produce a very useful simplified version. He suggested that the meeting should now adopt a set of comprehensive instructions for the refinement and development of those drafts, taking into account the comments of members, so that a small Drafting Group could progress the work during the inter-sessional period. The results of the VGE-5 discussions of Task 2 are at Annex D (Part 2).

3.3 Task 3

Mr. Shrum presented his report in Document 132. After discussion, including consideration of many new contributions, a new report was developed and is presented in Annex D (Part 3). The text deals with numerous articles as a whole and many individual texts of paragraphs of the Radio Regulations. It also contains a "mapping guide" to indicate the proposed locations and suggested revisions of many of the existing RR provisions.

4. Presentation of other contributions by experts and observers

4.1 Mr. Mayher, in response to questions, recalled the report of his CCIR Task Group 1/1 in Document 80 and explained that unless requested by the VGE to study any particular aspects, there was no need for a further meeting of the Group.

5. Discussion of future work

5.1 The VGE agreed that VGE-6 should be held between 6 and 15 October 1993. During the inter-sessional period there would be periodical meetings of the Steering Group. There would also be several meetings of the small Drafting Group on Task 2.

The material in Annex D (Parts 1-3) would serve as additional detailed guidelines for the development of drafts under all three tasks to augment those given in Document 98. If there was any conflict between them and the previous guidelines on Task 2, the material in Annex D (Part 2) should indicate the lines to follow.

5.2 The Chairman asked that all drafts of new texts be available to the Secretariat of the VGE no later than 15 August 1993 to allow for translation and distribution to members well before VGE-6.

5.3 The Chairman emphasized in a statement in Document 138 (see text at Annex E) that the work was being done by VGE members in their individual and personal capacities as experts. The views they expressed, their contributions and the Final Report of the VGE would not commit any administration, all of which would be free at the WRC-95 to express their own views on that product.

5.4 VGE-5 approved the programme governing the future work in Annex G of this report. This programme also contains the suggested schedule for information meetings.

6. Conclusions

6.1 The Chairman said that although a large body of foundation work had been done, the really difficult task of drafting must now be tackled. He suggested that in the future work the tendency should be towards some over-simplification rather than under-simplification, relying upon administrations in their preparations for the WRC-95 - and the Conference itself - to establish the acceptable optimum degree of simplification.

6.2 The Chairman invited the VGE to note a memorandum from himself to the Director of the Radiocommunication Bureau dealing with possible simplification of the MIFR and the IFL and another from the Rapporteur for Task 2 asking the IFRB to prepare a tabulated consideration of the characteristics listed in the appendices relating to requests for coordination and frequency assignment notices (see Annex F). Both tasks were now in hand and would result in contributions to VGE-6.

7. Acknowledgements

7.1 The Chairman expressed his appreciation for the contributions, written and oral, made by Members of the VGE, especially the work done by the three Rapporteurs. On behalf of the VGE as a whole he warmly thanked the VGE Secretary, the interpreters and all the ITU staff who, working behind the scenes, made outstanding contributions to the outcome of these meetings. Their prompt and efficient support enabled the VGE at each meeting to take several more steps towards the completion of their heavy task.

7.2 The Chairman referred also to dissolution of the IFRB on 1 March 1993 and the establishment of the Radio Regulations Board on the same day. All members past and present had well served the Union, but now when the APP-92 had decided upon these changes it was up to everybody to realize a maximum value from them.

Annex A - List of contributions

Annex B - List of participants

Annex C - Agenda of the meeting

Annex D - Part 1 Task 1

- Part 2 Task 2

- Part 3 Task 3

Annex E - Chairman's statement

Annex F - Memorandum from the Chairman of the VGE to the Director of the Radiocommunication Bureau

Annex G - Programme of future work